



PO No	Supplier	Line Item No	Ref No	Terms	Purchased Item	Description	For Part No	Project	Equipment ID	Order Qty	Due Date	Received Quantity	Accounting Job No	Serial No	Status	Receive Date	Price/Unit	Aging Days	Past Due	Total	Supplier Name
PO038754	ACI001-VC	1	1	Net 30	M1010S16GA	1010/1025 sheet 16GA : AISI 1010-1025 OR ASTM A36/A366/A1008 OR CSA G40-21, 38W/44W/50W/60W/70W NO SCALE ON SHEET MINIMUM YIELD TENSILE STRENGTH= 28KSI MINIMUM ULIMATE TENSILE STRENGTH= 42KSI COLD ROLLED receive sf				32	1/12/2018	32	S032204	S032204	Stock	1/15/2018	\$ 1.50 / sf	0		\$47.96	Acier Ouellette Inc.
		2			M1010S18GA	1010/1025 Sheet .048 : AISI 1010-1025 OR ASTM A36/A366/A1008 OR CSA G40-21, 38W/44W/50W/60W/70W NO SCALE ON SHEET MINIMUM YIELD TENSILE STRENGTH= 28KSI MINIMUM ULIMATE TENSILE STRENGTH= 42KSI COLD ROLLED receive sf				64		64	S032205	S032205	Stock	1/15/2018	\$ 1.60 / sf	0		\$102.34	Acier Ouellette Inc.
		3			M1010S20GA	1010/1025 Sheet : AISI 1010-1025 OR ASTM A36/A366/A1008 OR CSA G40-21, 38W/44W/50W/60W/70W NO SCALE ON SHEET MINIMUM YIELD TENSILE STRENGTH= 28KSI MINIMUM ULIMATE TENSILE STRENGTH= 42KSI COLD ROLLED receive sf				32		32	S032206	S032206	Stock	1/15/2018	\$ 1.20 / sf	0		\$38.38	Acier Ouellette Inc.
		4			M2024T3S.032	2024-T3 .032 Sheet : MATERIAL: 2024-T3 ALUMINUM SHEET AS PER QQ-A-250/4 OR AMS-QQ-A-250/4 OR AMS 4037 OR ASTM B209 receive sf				48		48	S032207	S032207	Stock	1/15/2018	\$ 4.49 / sf	0		\$215.60	Acier Ouellette Inc.
		5			M3024T3S.040	2024-T3 .040 Sheet : MATERIAL: 2024-T3 ALUMINUM SHEET AS PER QQ-A-250/4 OR AMS-QQ-A-250/4 OR AMS 4037 OR ASTM B209 receive sf						48	S032208	S032208	Stock	1/15/2018	\$ 4.23 / sf	0		\$202.94	Acier Ouellette Inc.
		6			M2024T3S.050	2024-T3 .050 Sheet : MATERIAL: 2024-T3 ALUMINUM SHEET AS PER QQ-A-250/4 OR AMS-QQ-A-250/4 OR AMS 4037 OR ASTM B209 receive sf						48	S032209	S032209	Stock	1/15/2018	\$ 7.15 / sf	0		\$343.24	Acier Ouellette Inc.
		7			M2024T3S.080	2024-T3 .080 Sheet : MATERIAL: 2024-T3 ALUMINUM SHEET AS PER QQ-A-250/4 OR AMS-QQ-A-250/4 OR AMS 4037 OR ASTM B209 receive sf						48	S032210	S032210	Stock	1/15/2018	\$ 11.36 / sf	0		\$545.46	Acier Ouellette Inc.
		8			M304S11GA	304/316 0.125 Sheet : MATERIAL: AISI 304/316 SS SHEET ANNEALED AS PER MIL-S-5059 OR AMS 5513 (304) OR AMS 5524 (316) OR ASTM A240 OR ASME SA240 receive sf				64		64	S032211	S032211	Stock	1/15/2018	\$ 12.23 / sf	0		\$782.71	Acier Ouellette Inc.
		9			M304S12GA	304/316 0.100" Sheet : MATERIAL: AISI 304/316 SS SHEET ANNEALED AS PER MIL-S-5059 OR AMS 5513 (304) OR AMS 5524 (316) OR ASTM A240 OR ASME SA240 receive sf				32		32	S032212	S032212	Stock	1/15/2018	\$ 12.09 / sf	0		\$386.56	Acier Ouellette Inc.
		10			M304S18GA	304/316 .050 Sheet : MATERIAL: AISI 304/316 SS SHEET ANNEALED AS PER MIL-S-5059 OR AMS 5513 (304) OR AMS 5524 (316) OR ASTM A240 OR ASME SA240 receive sf				160		160	S032213	S032213	Stock	1/15/2018	\$ 5.36 / sf	0		\$856.80	Acier Ouellette Inc.
<b>Total:</b>										<b>576</b>		<b>576</b>								<b>\$2,831.37</b>	

**ACIER OUELLETTE INC.**

935, Boul. du Havre  
Sahaberry de Valleyfield (Québec) J6S 5L1  
Tél.: 450-377-4248 Mtl: 514-336-4248 Ext.: 800-667-4248  
Fax: 450-377-5696 Mtl: 514-336-4246 Ext.: 866-456-4242

**Order - Sales****Copy**

CO00069188

**Billed to**  
DART AEROSPACE LTD  
1270, ABERDEEN ST.  
HAWKESBURY, Ontario, K6A 1K7

**Shipped to**  
Ontario,  
At: CHANTAL LAVOIE Tél.: 613-632-5200  
Delivery Route 5

**Customer N°** CLT0001056  
**Date** 2018/01/10  
**Delivery date** 2018/01/12  
**Your order N°** 38754  
**Processed by** Josianne Bourdon  
**Salesman**  
**Carrier** OUELLETTE VALLEYFIELD  
**Credit Terme** Net 30 Days  
**Page** 1

Product Description	Weight	Qty	U/M	PCS NB			Internal Use Only					
				CMD	EXP	S/O	IN	I	S	C	OUT	
1 HR SHEET 16G (4 X 8) 1011 FEH-16G48 3008 1 X 4' X 8' HEAT: 025204-05	80.00	32.00	PI2_\$CLB	1.00								
2 CR SHEET 18G (4 X 8) 1018 FECH-18G48 3280 2 X 4' X 8' HEAT: 162805571 / 162805871	128.00	64.00	PI2_\$CLB	2.00								
3 CR SHEET 20G (4 X 8) 1018 FECH-20G48 3282 1 X 4' X 8' HEAT: 7PB0060630	48.00	32.00	PI2_\$CLB	1.00								
4 ALU SHEET .032 (20G) 2024-T3 (4 X 12) FEAL-0324122024 3093 1 X 4' X 12' HEAT: 23717181 AC12663-SA-11/01	21.65	48.00	PI2_\$CLB	1.00								

NIR : R-109516-6

Next Page...

**ACIER OUELLETTE INC.**

935, Boul. du Havre  
Salaberry de Valleyfield (Québec) J6S 5L1  
Tél.: 450-377-4248 Mtl: 514-336-4248 Ext.: 800-667-4248  
Fax: 450-377-5696 Mtl: 514-336-4246 Ext.: 866-456-4242

**Order - Sales****Copy**

C000069188

**Billed to**  
DART AFROSPACE LTD  
1270, ABERDEEN ST.  
HAWKESBURY, Ontario, K6A 1K7

**Shipped to**  
  
Ontario,  
At: CHANTAL LAVOIE Tél.: 613-632-5200  
**Delivery Route** 5

**Customer N°** CL10001056  
**Date** 2018/01/10  
**Delivery date** 2018/01/12  
**Your order N°** 38754  
**Processed by** Josianne Bourdon  
**Salesman**  
**Carrier** OUELLETTE VALLEYFIELD  
**Credit Terme** Net 30 Days  
**Page** 2

Product Description	Weight	Qty	U/M	PCS NB			Internal Use Only				
				CMD	EXP	B/O	IN	I	S	C	OUT
5 ALU SHEET .040 (18G) 2024-T3 5A (4 X 12) FEAL-0404122024A 3117 1 X 4' X 12' HEAT: 21954787	27.02	48.00	PI2_\$CLB	1.00							
6 ALU SHEET .051 (16G) 2024-T3 (4 X 12) FEAL-0514122024 3142 1 X 4' X 12' HEAT: 68968/01/00 AC12663-SA-11/01	34.46	48.00	PI2_\$CLB	1.00							
7 ALU SHEET .081 (12G) 2024-T3 (4 X 12) FEAL-0814122024 3192 1 X 4' X 12' HEAT: 22397389 AC12663-SA-11/01	54.77	48.00	PI2_\$CLB	1.00							
8 SHEET SS 11G SS304-2B (4 X 8) FESS-11G4830428 3402 2 X 4' X 8' HEAT: 459P	336.00	64.00	PI2_\$CLB	2.00							

NIR : R-109516-6

Next Page...



# ACIER OUELLETTE INC.

935, Boul. du Havre  
Salaberry de Valleyfield (Québec) J6S 5L1  
Tél.: 450-377-4248 Md: 514-336-4248 Ext.: 800-667-4248  
Fax: 450-377-5696 MB: 514-336-4246 Ext.: 866-456-4242

## Order - Sales

## Copy

CO00069188

**Billed to**  
DART AEROSPACE LTD  
1270, ABERDEEN ST.  
HAWKESBURY, Ontario, K6A 1K7

**Shipped to**  
 , Ontario,  
Att : CHANTAL LAVOIE Tél.: 613-632-5200  
**Delivery Route** 5

**Customer N°** CL10001056  
**Date** 2018/01/10  
**Delivery date** 2018/01/12  
**Your order N°** 38754  
**Processed by** Josianne Bourdon  
**Salesman**  
**Carrier** OUELLETTE VALLEYFIELD  
**Credit Terme** Net 30 Days  
**Page** 3

Product Description	Weight	Qty	U/M	PCS NB			Internal Use Only				
				CMD	EXP	B/O	IN	I	S	C	OUT
9 SHEET SS 12G SS304-2B (4 X 8) FESS-12G483042B 3407 1 X 4' X 8' HEAT: 473Y	147.01	32.00	PI2_\$CLB	1.00							
10 SHEET SS 18G SS304-2B (4 X 8) FESS-18G483042B 3425 5 X 4' X 8' HEAT: 088E SURCHARGE ENERGETIQUE FRAIS_ENERGETIQUE	336.00	160.00	PI2_\$CLB	5.00							
			\$	0.00							

Total Weight (LBS) : 1 212.91

NIR : R-109516-6

**Conditions :**  
As sold and delivered materials remain the property of "Acier Ouellette Inc." until payment is made in full, complete and cashed. All lost materials are at the buyer's expense. The warranty offered by "Acier Ouellette Inc." is the same as offered and honored by the manufacturer and its warranty is transferred by "Acier Ouellette Inc." to the client. The buyer hereby accepts to respect the following conditions: Net 30 days from billing date and the buyer accepts to pay administration charges of 2% per month (24% per annum) on all past due amounts over 30 days. Any default in respect with this contract will lead to payment by acceleration and permits to the seller, at his choice to claim for the balance due or the repossession of the goods sold. All claims must be made within five (5) days with this document enclosed. Any merchandise that has been damaged, cut or modified cannot be returned. All goods returned must be with our authorization and are subject to a 25% restocking charge.

Prepared By :	Verified By :	Delivered By :	Time	Customer's Signature	Y	M	D

**Total (\$CAD)** 3 984.31  
**Deposit** 0.00  
**Balance** 3 984.31

# MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M10105166A  
DATE: JAN 12 2018

PO / BATCH NO: 038754/5032204

MATERIAL CERT REC'D: yes  
QUANTITY RECEIVED: 32<sup>0.2</sup>  
QUANTITY INSPECTED: 32<sup>0.2</sup>  
QUANTITY REJECTED: 0

THICKNESS ORDERED: 166  
THICKNESS RECEIVED: 166  
SHEET SIZE ORDERED: 4x8  
SHEET SIZE RECEIVED: 4x8

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y (N)	
CORRECT FINISH	(Y) N	
CORROSION	Y (N)	
CORRECT GRAIN DIRECTION	(Y) N	
CORRECT MATERIAL PER M-DRAWING	(Y) N	Astm A 1041
CORRECT THICKNESS	(Y) N	
PHOTO REQUIRED	Y (N)	
CORRECT REF # TO LINK CERT	(Y) N	Heat #02520405
CORRECT MATERIAL IDENTIFICATION	(Y) N	
CORRECT M# ON THE MATERIAL	(Y) N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y (N)	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y (N)	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)	
INSPECTED BY: <u>11</u> <u>989</u>	SIGNED OFF BY: _____		
DATE: <u>JAN 12 2018</u>	DATE: _____		

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in



DESIGN <i>[Signature]</i>	DRAWN BY <i>[Signature]</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. M1010-S	REV. A SHEET <u>1</u> OF <u>1</u>
DATE 01.06.13		TITLE 1010-1025 SHEET	SCALE NTS
A	01.06.13	NEW ISSUE	
A1	04.03.09 <i>[Signature]</i>	ADD ASTM A1008 AND COLD ROLLED	

PURCHASE MATERIAL:

*[Handwritten: 1010-1025]* OR ASTM A36 / A366 / A1008  
OR CSA C40-21, 38W / 44W / 50W / 60W / 70W

MINIMUM YIELD TENSILE STRENGTH = 28 KSI

MINIMUM ULTIMATE TENSILE STRENGTH = 42 KSI

COLD ROLLED

PART NUMBER:

M1010-S | TT | GA    WHERE TT = GAUGE THICKNESS  
          | GA |

EG. 16 GAUGE STEEL = M1010-S16GA

RELEASED  
01-06-15 *[Signature]*

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# MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M10105206A  
 DATE: JAN 16 2018

PO / BATCH NO.: 038234/5032206

MATERIAL CERT REC'D: Yes  
 QUANTITY RECEIVED: 32<sup>12</sup>  
 QUANTITY INSPECTED: 32<sup>12</sup>  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 206A  
 THICKNESS RECEIVED: 206A  
 SHEET SIZE ORDERED: 4x8  
 SHEET SIZE RECEIVED: 4x8

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	(N)	
CORRECT FINISH	(Y)	N	
CORROSION	Y	(N)	
CORRECT GRAIN DIRECTION	(Y)	N	
CORRECT MATERIAL PER M-DRAWING	(Y)	N	Astm A1008
CORRECT THICKNESS	(Y)	N	
PHOTO REQUIRED	Y	(N)	
CORRECT REF # TO LINK CERT	(Y)	N	Heat # 7PB0060630
CORRECT MATERIAL IDENTIFICATION	(Y)	N	
CORRECT M# ON THE MATERIAL	(Y)	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	(N)	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	(N)	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

*testers located in the Quality Office*

<b>QC 18 INSPECTION</b>		<b>ENGINEERING SIGNOFF (if required)</b>	
INSPECTED BY: <u>DAS</u>	<b>11</b>	SIGNED OFF BY: _____	
DATE: <u>9-89</u>	JAN 16 2018	DATE: _____	

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in



DESIGN <i>[Signature]</i>	DRAWN BY <i>[Signature]</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. M1010-S	REV. A SHEET 1 OF 1
DATE 01.06.13		TITLE 1010-1025 SHEET	SCALE N.T.S.
A	01.06.13	NEW ISSUE	
A1	04.03.09 <i>[Signature]</i>	ADD ASTM A1008 AND COLD ROLLED	

PURCHASE MATERIAL:

*real*  
ASTI 1010-1025 OR ASTM A36 / A366 / A1008  
OR CSA G40-21, 38W / 44W / 50W / 60W / 70W

MINIMUM YIELD TENSILE STRENGTH = 28 KSI

MINIMUM ULTIMATE TENSILE STRENGTH = 42 KSI

COLD ROLLED

PART NUMBER:

M1010-S TT/GA WHERE TT = GAUGE THICKNESS  
GA

EG. 16 GAUGE STEEL = M1010-S16GA

RELEASED  
01.02.15 *[Signature]*

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# MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M10105186A  
 DATE: JAN 16 2018

PO / BATCH NO.: 038754/5022205

MATERIAL CERT REC'D: YES  
 QUANTITY RECEIVED: 64P12  
 QUANTITY INSPECTED: 64P12  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: .048  
 THICKNESS RECEIVED: .048  
 SHEET SIZE ORDERED: 4x8  
 SHEET SIZE RECEIVED: 4x8

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <input checked="" type="radio"/> N	
CORRECT FINISH	<input checked="" type="radio"/> Y N	
CORROSION	<input checked="" type="radio"/> Y <input checked="" type="radio"/> N	
CORRECT GRAIN DIRECTION	<input checked="" type="radio"/> Y N	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="radio"/> Y N	<u>Astm A1008</u>
CORRECT THICKNESS	<input checked="" type="radio"/> Y N	
PHOTO REQUIRED	<input checked="" type="radio"/> Y <input checked="" type="radio"/> N	
CORRECT REF # TO LINK CERT	<input checked="" type="radio"/> Y N	<u>Heat# 162B05571/162B05871</u>
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="radio"/> Y N	
CORRECT M# ON THE MATERIAL	<input checked="" type="radio"/> Y N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <input checked="" type="radio"/> N	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <input checked="" type="radio"/> N	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>DAS 11</u> DATE: <u>9-89 JAN 16 2018</u>	SIGNED OFF BY: _____ DATE: _____	

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in



DESIGN <i>[Signature]</i>	DRAWN BY <i>[Signature]</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. M1010-S	REV. A SHEET 1 OF 1
DATE 01.06.13		TITLE 1010-1025 SHEET	SCALE NTS
A	01.06.13	NEW ISSUE	
A1	04.03.09 <i>[Signature]</i>	ADD ASTM A1008 AND COLD ROLLED	

PURCHASE MATERIAL:

*[Handwritten: - 4]*  
AISI 1010-1025 OR ASTM A36 / A366 / A1008  
OR CSA G40-21, 38W / 44W / 50W / 60W / 70W

MINIMUM YIELD TENSILE STRENGTH = 28 KSI

MINIMUM ULTIMATE TENSILE STRENGTH = 42 KSI

COLD ROLLED

PART NUMBER:

M1010-S TT GA WHERE TT = GAUGE THICKNESS  
GA

EG. 16 GAUGE STEEL = M1010-S16 GA

RELEASED  
01.06.15 *[Signature]*

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# MATERIAL RECEIPT INSPECTION FORM

MATERIAL M2024735.032  
 DATE: JAN 16 2018

PO / BATCH NO. 03874/5032207

MATERIAL CERT REC'D: Yes  
 QUANTITY RECEIVED: 4812  
 QUANTITY INSPECTED: 4812  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 0.32  
 THICKNESS RECEIVED: 0.32  
 SHEET SIZE ORDERED: 4x12  
 SHEET SIZE RECEIVED: 4x12

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y (N)	
CORRECT FINISH	Y (N)	
CORROSION	Y (N)	
CORRECT GRAIN DIRECTION	Y (N)	
CORRECT MATERIAL PER M-DRAWING	Y (N)	Ams-QQ A-250
CORRECT THICKNESS	Y (N)	
PHOTO REQUIRED	Y (N)	
CORRECT REF # TO LINK CERT	Y (N)	Heat # 23717184
CORRECT MATERIAL IDENTIFICATION	Y (N)	
CORRECT M# ON THE MATERIAL	Y (N)	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y (N)	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y (N)	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC-18 INSPECTION		ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>DAS 11</u> DATE: <u>9.89 JAN 16 2018</u>	SIGNED OFF BY: _____ DATE: _____	

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

**SPECIFICATION CONTROL DRAWING**

PURCHASE MATERIAL: 2024-T3 ALUMINUM SHEET

SPECIFICATION: QQ-A-250/4 OR AMS-QQ-A-250/4  
OR ASTM B208

PART NUMBER: M2024T3S XXX THK

WHERE "XXX" = SHEET THICKNESS (IN INCHES)  
EG. 0.063" THICK SHEET = M2024T3S.063

PREFERRED SIZE: XXX BY 4FT BY 10FT

**RELEASED**  
R 2009-03-13

B	REFORMAT DWG. ADD ASTM B209 SPEC (ZN D8-1), PAR	CP	09 07 07
A	NEW ISSUE	DS	01 09 24
REV	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR			
DATE	09.07.07		

DART AEROSPACE LTD	
HAWKESBURY, ONTARIO, CANADA	
DRAWING NO	M2024T3S
TITLE	2024-T3 SHEET SPEC
SCALE	NTS
SHEET 1 OF 1	REV. B

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# MATERIAL RECEIPT INSPECTION FORM

MATERIAL M2024735.040  
 DATE: JAN 15 2019

PO / BATCH NO.: 038754/6032208

MATERIAL CERT REC'D YES  
 QUANTITY RECEIVED: 4800  
 QUANTITY INSPECTED: 4800  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: .040  
 THICKNESS RECEIVED: .040  
 SHEET SIZE ORDERED: 4X12  
 SHEET SIZE RECEIVED: 4X12

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	<input checked="" type="checkbox"/> N	
CORRECT FINISH	<input checked="" type="checkbox"/> Y	N	
CORROSION	Y	<input checked="" type="checkbox"/> N	
CORRECT GRAIN DIRECTION	<input checked="" type="checkbox"/> Y	N	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="checkbox"/> Y	N	Am5-QQ-A-250
CORRECT THICKNESS	<input checked="" type="checkbox"/> Y	N	
PHOTO REQUIRED	Y	<input checked="" type="checkbox"/> N	
CORRECT REF # TO LINK CERT	<input checked="" type="checkbox"/> Y	N	Heat # 21954787
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="checkbox"/> Y	N	
CORRECT M# ON THE MATERIAL	<input checked="" type="checkbox"/> Y	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	<input checked="" type="checkbox"/> N	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	<input checked="" type="checkbox"/> N	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>DAS 11</u> DATE: <u>9-89 JAN 16 2019</u>	SIGNED OFF BY: _____ DATE: _____	

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: 2024-T3 ALUMINUM SHEET

SPECIFICATION: QQ-A-250/01 OR AMS-QQ-A-250/4  
OR AMS 4037  
OR ASTM B209

PART NUMBER: M2024T3S | XXX | THK

WHERE "XXX" = SHEET THICKNESS (IN INCHES)

EG. 0.063" THICK SHEET = M2024T3S.063

PREFERRED SIZE: .XXX BY 4FT BY 10FT

RELEASED  
R 2009-02-23  
MP

B	REFORMAT DWG. ADD ASTM B209 SPEC (Zn D8-1), PAR 09-020A	CP	09 07 07
A	NEW ISSUE	DS	01 09 24
REV	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR			
APPROVED			
DE APPR			
DATE	09.07.07		
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA			
DRAWING NO. M2024T3S			
TITLE 2024-T3 SHEET SPEC			
SHEET 1 OF 1			
SCALE NTS			
DATE 09.07.07			
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# MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M2024735.050  
 DATE: JAN 16 2018

PO / BATCH NO. 038754/5032209

MATERIAL CERT REC'D: Yes  
 QUANTITY RECEIVED: 48112  
 QUANTITY INSPECTED: 48112  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 050  
 THICKNESS RECEIVED: 050  
 SHEET SIZE ORDERED: 4X12  
 SHEET SIZE RECEIVED: 4X12

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <input checked="" type="radio"/> N <input type="radio"/>	
CORRECT FINISH	Y <input checked="" type="radio"/> N <input type="radio"/>	
CORROSION	Y <input checked="" type="radio"/> N <input type="radio"/>	
CORRECT GRAIN DIRECTION	Y <input checked="" type="radio"/> N <input type="radio"/>	
CORRECT MATERIAL PER M-DRAWING	Y <input checked="" type="radio"/> N <input type="radio"/>	AMS-QQ-A-250
CORRECT THICKNESS	Y <input checked="" type="radio"/> N <input type="radio"/>	
PHOTO REQUIRED	Y <input checked="" type="radio"/> N <input type="radio"/>	
CORRECT REF # TO LINK CERT	Y <input checked="" type="radio"/> N <input type="radio"/>	Heat# 68968/01/00
CORRECT MATERIAL IDENTIFICATION	Y <input checked="" type="radio"/> N <input type="radio"/>	
CORRECT M# ON THE MATERIAL	Y <input checked="" type="radio"/> N <input type="radio"/>	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <input checked="" type="radio"/> N <input type="radio"/>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <input checked="" type="radio"/> N <input type="radio"/>	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>DA 1</u> DATE: <u>9-85 JAN 16 2018</u>	SIGNED OFF BY: _____ DATE: _____	

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

# SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: 2024-T3 ALUMINUM SHEET

SPECIFICATION: QQ-A-250/4 OR AMS-QQ-A-250/4

OR AMS-4037

OR ASTM B209

PART NUMBER: M2024T3S | XXX | THK

WHERE "XXX" = SHEET THICKNESS (IN INCHES)

EG. 0.063" THICK SHEET = M2024T3S.063

PREFERRED SIZE: XXX BY 4FT BY 10FT

RELEASED  
R 2009-03-03

B	REFORMAT DWG. ADD ASTM B209 SPEC (ZN D8-1), PAR	CP	09.07.07
A	NEW ISSUE	DS	01.09.24
REV	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	09.07.07		
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA			
DRAWING NO M2024T3S			
TITLE 2024-T3 SHEET SPEC			
SCALE 1:1			
SHEET 1 OF 1			
NTS			
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# MATERIAL RECEIPT INSPECTION FORM

MATERIAL M2024435.080  
 DATE: JAN 16 2018

PO / BATCH NO.: 038754/8032210

MATERIAL CERT REC'D: Yes  
 QUANTITY RECEIVED: 48A2  
 QUANTITY INSPECTED: 48A2  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: .080  
 THICKNESS RECEIVED: .080  
 SHEET SIZE ORDERED: 4X12  
 SHEET SIZE RECEIVED: 4X12

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y (N)	
CORRECT FINISH	(Y) N	
CORROSION	Y (N)	
CORRECT GRAIN DIRECTION	(Y) N	
CORRECT MATERIAL PER M-DRAWING	(Y) N	QQ-A-250
CORRECT THICKNESS	(Y) N	
PHOTO REQUIRED	Y (N)	
CORRECT REF # TO LINK CERT	(Y) N	Heat# 223973B9
CORRECT MATERIAL IDENTIFICATION	(Y) N	
CORRECT M# ON THE MATERIAL	(Y) N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y (N)	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y (N)	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

<b>QC 18 INSPECTION</b>		<b>ENGINEERING SIGNOFF (if required)</b>	
INSPECTED BY: <u>DAS 11</u> DATE: <u>9-89 JAN 16 2018</u>	SIGNED OFF BY: _____ DATE: _____		

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

**SPECIFICATION CONTROL DRAWING**

PURCHASE MATERIAL: 2024-T3 ALUMINUM SHEET

SPECIFICATION: ~~QQ-A-250/4~~ OR AMS-QQ-A-250/4  
~~OR AMS 4037~~

OR ASTM B209

PART NUMBER: M2024T3S | XXX | THK

WHERE "XXX" = SHEET THICKNESS (IN INCHES)

EG. 0.063" THICK SHEET = M2024T3S 063

PREFERRED SIZE: .XXX BY 4FT BY 10FT

**RELEASED**  
2009-07-23  
JNB

B	REFORMAT DWG. ADD ASTM B209 SPEC (2N D8-1), PAR	CP	09.07.07
A	NEW ISSUE	DS	01.09.24
REV	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	09.07.07		
DART AEROSPACE LTD			
DRAWING NO. M2024T3S			
TITLE 2024-T3 SHEET SPEC			
REV. B			
SHEET 1 OF 1			
SCALE NTS			
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# MATERIAL RECEIPT INSPECTION FORM

MATERIAL M304S11GA  
 DATE: JAN 16 2018

PO / BATCH NO. 038754/503221

MATERIAL CERT REC'D: Yes  
 QUANTITY RECEIVED: 64PI2  
 QUANTITY INSPECTED: 64PI2  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 0.125  
 THICKNESS RECEIVED: 0.125  
 SHEET SIZE ORDERED: 4X8  
 SHEET SIZE RECEIVED: 4X8

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	<input checked="" type="radio"/> N	
CORRECT FINISH	<input checked="" type="radio"/> Y	<input type="radio"/> N	
CORROSION	Y	<input checked="" type="radio"/> N	
CORRECT GRAIN DIRECTION	<input checked="" type="radio"/> Y	<input type="radio"/> N	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="radio"/> Y	<input type="radio"/> N	<u>As per A240</u>
CORRECT THICKNESS	<input checked="" type="radio"/> Y	<input type="radio"/> N	
PHOTO REQUIRED	Y	<input checked="" type="radio"/> N	
CORRECT REF # TO LINK CERT	<input checked="" type="radio"/> Y	<input type="radio"/> N	<u>Heat # 4397</u>
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="radio"/> Y	<input type="radio"/> N	
CORRECT M# ON THE MATERIAL	<input checked="" type="radio"/> Y	<input type="radio"/> N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	<input checked="" type="radio"/> N	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	<input checked="" type="radio"/> N	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

*testers located in the Quality Office*

<b>QC 18 INSPECTION</b>		<b>ENGINEERING SIGNOFF (if required)</b>	
INSPECTED BY: <u>DAS 11</u> DATE: <u>9-89 JAN 16 2018</u>	SIGNED OFF BY: _____ DATE: _____		

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: AISI 304/316 SS SHEET  
ANNEALED

SPECIFICATION:

MIL-S-5059  
OR AMS 5513 (304)  
OR AMS 5524 (316)  
OR ASTM A240  
OR ASME SA240

FINISH:

FINISH IDENTIFIER  
UNPOLISHED No. 1  
UNPOLISHED No. 2D  
UNPOLISHED No. 2B  
POLISHED No. 3  
POLISHED No. 4  
BUFFED No. 6  
BUFFED No. 7  
BUFFED No. 8  
PART M-NUMBER IDENTIFIER  
1P  
2D  
3P  
4P  
6P  
7P  
8P

PART NUMBER:

M304S TT GA #P  
[GA]

WHERE "TT" = GAUGE THICKNESS  
WHERE "#P" = FINISH IDENTIFIER

EG. 16 GAUGE SS SHEET 2B FINISH = M304S16GA  
EG. 16 GAUGE SS SHEET No. 4 POLISHED = M304S16GA4P

GAUGE THICKNESS REFERENCE:

GAUGE	NOM. THICK. (IN)	THICKNESS RANGE (IN)
26	0.01875	0.0178 - 0.019
25	0.021875	0.0199 - 0.023
24	0.025	0.024 - 0.026
23	0.028125	0.027 - 0.029
22	0.03125	0.030 - 0.032
21	0.034375	0.033 - 0.035
20	0.0375	0.036 - 0.040
19	0.04375	0.041 - 0.046
18	0.050	0.047 - 0.052
17	0.05625	0.053 - 0.058
16	0.0625	0.059 - 0.065
15	0.0703125	0.066 - 0.072
14	0.078125	0.073 - 0.083
13	0.09375	0.084 - 0.098
12	0.109375	0.099 - 0.114
11	0.125	0.115 - 0.130
10	0.140625	0.131 - 0.145
9	0.15625	0.146 - 0.160
8	0.171875	0.161 - 0.176
7	0.1875	0.182 - 0.194
6	0.2031	0.194 - 0.212
5	0.2188	0.201 - 0.228
4	0.2344	0.223 - 0.243
3	0.2500	0.236 - 0.262
2	0.2656	0.254 - 0.278
1	0.2813	0.269 - 0.293
0	0.3125	0.301 - 0.325

RELEASED

2015 FEB 04

ECN 13-122

D	ADDED GAUGES 0-7	AJS	15.01.06
C	DEFINED FINISH OPTION (2N CB) AND EXAMPLE OF MATERIAL FIN WITH FINISH OTHER THAN 2B (2N B5)	MB	12.09.20
B	REFORMAT DWG. ADD ASTM/ASME SPECS (2N DE-1). ADD GAUGE REF (CB-1). REF PAR 08-020A	CP	09.06.01
A	NEW ISSUE	DS	01.09.24
REV	DESCRIPTION	BY	DATE
DESIGN	DS		
DRAWN	AJS		
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	15.01.06		
DART AEROSPACE LTD HAMKESBURY, ONTARIO, CANADA			
DRAWING NO. M304S			
TITLE 304/316 SS SHEET			
REV. D			
SHEET 1 OF 1			
SCALE NTS			
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# MATERIAL RECEIPT INSPECTION FORM

MATERIAL M3045126A  
 DATE: JAN 16 2018

PO : BATCH NO. 038754/5032212

MATERIAL CERT REC'D: Yes  
 QUANTITY RECEIVED: 32<sup>1/2</sup>  
 QUANTITY INSPECTED: 32<sup>1/2</sup>  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 0.100  
 THICKNESS RECEIVED: 0.100  
 SHEET SIZE ORDERED: 4x8  
 SHEET SIZE RECEIVED: 4x8

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	<input checked="" type="radio"/> Y	<input checked="" type="radio"/> N	
CORRECT FINISH	<input checked="" type="radio"/> Y	<input checked="" type="radio"/> N	
CORROSION	<input checked="" type="radio"/> Y	<input checked="" type="radio"/> N	
CORRECT GRAIN DIRECTION	<input checked="" type="radio"/> Y	<input checked="" type="radio"/> N	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="radio"/> Y	<input checked="" type="radio"/> N	<u>Aston A240</u>
CORRECT THICKNESS	<input checked="" type="radio"/> Y	<input checked="" type="radio"/> N	
PHOTO REQUIRED	<input checked="" type="radio"/> Y	<input checked="" type="radio"/> N	
CORRECT REF # TO LINK CERT	<input checked="" type="radio"/> Y	<input checked="" type="radio"/> N	<u>Heat# 471Y</u>
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="radio"/> Y	<input checked="" type="radio"/> N	
CORRECT M# ON THE MATERIAL	<input checked="" type="radio"/> Y	<input checked="" type="radio"/> N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	<input checked="" type="radio"/> Y	<input checked="" type="radio"/> N	
DOES THIS REQUIRE AN EXTRUSION REPORT	<input checked="" type="radio"/> Y	<input checked="" type="radio"/> N	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 15 INSPECTION		ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>11</u> <u>9-89</u>	SIGNED OFF BY: _____	
DATE: <u>JAN 16 2018</u>	DATE: _____	

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

# SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: AISI 304/316 SS SHEET  
ANNEALED

SPECIFICATION:

MIL-S-5059  
OR AMS 5513 (304)  
OR AMS 5524 (316)  
OR ASTM A240  
OR ASME SA240

FINISH:

FINISH  
UNPOLISHED No. 1  
UNPOLISHED No. 2D  
UNPOLISHED No. 2B  
POLISHED No. 3  
POLISHED No. 4  
BUFFED No. 6  
BUFFED No. 7  
BUFFED No. 8

DART M-NUMBER  
IDENTIFIER

1P  
2D  
NONE  
3P  
4P  
6P  
7P  
8P

PART NUMBER:

M304S TT GA #P  
[GA]

WHERE "TT" = GAUGE THICKNESS  
WHERE "#P" = FINISH IDENTIFIER

EG. 16 GAUGE SS SHEET 2B FINISH = M304S16GA  
EG. 16 GAUGE SS SHEET No. 4 POLISHED = M304S16GA4P

GAUGE THICKNESS REFERENCE:

GAUGE	NOM. THICK. (IN)	THICKNESS RANGE (IN)
26	0.01875	0.0178 - 0.019
25	0.021875	0.0199 - 0.023
24	0.025	0.024 - 0.026
23	0.028125	0.027 - 0.029
22	0.03125	0.030 - 0.032
21	0.034375	0.033 - 0.035
20	0.0375	0.036 - 0.040
19	0.04375	0.041 - 0.046
18	0.050	0.047 - 0.052
17	0.05625	0.053 - 0.058
16	0.0625	0.059 - 0.065
15	0.0703125	0.066 - 0.072
14	0.078125	0.073 - 0.083
13	0.08375	0.084 - 0.098
12	0.109375	0.099 - 0.114
11	0.125	0.115 - 0.130
10	0.140625	0.131 - 0.145
9	0.15625	0.146 - 0.160
8	0.171875	0.161 - 0.176
7	0.1875	0.182 - 0.194
6	0.2031	0.194 - 0.212
5	0.2188	0.201 - 0.228
4	0.2344	0.225 - 0.243
3	0.2500	0.238 - 0.262
2	0.2656	0.254 - 0.278
1	0.2813	0.269 - 0.293
0	0.3125	0.301 - 0.325

RELEASED

2015 FEB 04

ECN 15-122

D	ADDED GAUGES 0-7	AJS	15 01 06
C	DEFINED FINISH OPTION (ZN C8) AND EXAMPLE OF MATERIAL FIN WITH FINISH OTHER THAN 2B (ZN B5)	MB	12 09 20
B	REFORMAT DWG. ADD ASTM/ASME SPECS (ZN D8-1), ADD GAUGE REF (C8-1), REF PAR 08-020A	CP	09 06 01
A	NEW ISSUE	DS	01 09 24
REV.	DESCRIPTION	BY	DATE
DRAWN	DS		
CHECKED	AJS		
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	15.01.06		
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA			
DRAWING NO. M304S			
TITLE 304/316 SS SHEET			
SCALE			
SHEET 1 OF 1			
NTS			

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# MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M3045186A  
 DATE: JAN 16 2013

PO + BATCH NO. 038754/5032213

MATERIAL CERT REC'D yes  
 QUANTITY RECEIVED 160 PIR  
 QUANTITY INSPECTED 160 PIR  
 QUANTITY REJECTED 0

THICKNESS ORDERED .030  
 THICKNESS RECEIVED .050  
 SHEET SIZE ORDERED 4x8  
 SHEET SIZE RECEIVED 4x8

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <input checked="" type="radio"/> N <input type="radio"/>	
CORRECT FINISH	<input checked="" type="radio"/> Y <input type="radio"/> N <input type="radio"/>	
CORROSION	Y <input type="radio"/> N <input checked="" type="radio"/>	
CORRECT GRAIN DIRECTION	<input checked="" type="radio"/> Y <input type="radio"/> N <input type="radio"/>	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="radio"/> Y <input type="radio"/> N <input type="radio"/>	<u>Astm A240</u>
CORRECT THICKNESS	<input checked="" type="radio"/> Y <input type="radio"/> N <input type="radio"/>	
PHOTO REQUIRED	Y <input type="radio"/> N <input checked="" type="radio"/>	
CORRECT REF # TO LINK CERT	<input checked="" type="radio"/> Y <input type="radio"/> N <input type="radio"/>	<u>Heat # 088E</u>
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="radio"/> Y <input type="radio"/> N <input type="radio"/>	
CORRECT M# ON THE MATERIAL	<input checked="" type="radio"/> Y <input type="radio"/> N <input type="radio"/>	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <input type="radio"/> N <input checked="" type="radio"/>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <input checked="" type="radio"/> N <input type="radio"/>	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>DAS 11</u> DATE: <u>9-89 JAN 16 2013</u>	SIGNED OFF BY: _____ DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

# SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: AISI 304/316 SS SHEET  
ANNEALED

SPECIFICATION:

MIL-S-5059  
OR AMS 5513 (304)  
OR AMS 5524 (316)  
OR ASTM A240  
OR ASME SA240

FINISH:

FINISH  
UNPOLISHED No. 1  
UNPOLISHED No. 2D  
UNPOLISHED No. 2B  
POLISHED No. 3  
POLISHED No. 4  
BUFFED No. 6  
BUFFED No. 7  
BUFFED No. 8

DART M-NUMBER  
IDENTIFIER  
1P  
2D  
NONE  
3P  
4P  
6P  
7P  
8P

PART NUMBER:

M304S1TT GA #P  
GA

WHERE "TT" = GAUGE THICKNESS  
WHERE "#P" = FINISH IDENTIFIER

EG. 16 GAUGE SS SHEET 2B FINISH = M304S16GA  
EG. 16 GAUGE SS SHEET No. 4 POLISHED = M304S16GA4P

GAUGE THICKNESS REFERENCE:

GAUGE	NOM. THICK. (IN)	THICKNESS RANGE (IN)
26	0.01875	0.0178 - 0.019
25	0.021875	0.0199 - 0.023
24	0.025	0.024 - 0.026
23	0.028125	0.027 - 0.029
22	0.03125	0.030 - 0.032
21	0.034375	0.033 - 0.035
20	0.0375	0.036 - 0.040
19	0.04375	0.041 - 0.046
18	0.050	0.047 - 0.052
17	0.05625	0.053 - 0.058
16	0.0625	0.059 - 0.065
15	0.0703125	0.066 - 0.072
14	0.078125	0.073 - 0.083
13	0.09375	0.084 - 0.098
12	0.109375	0.099 - 0.114
11	0.125	0.115 - 0.130
10	0.140625	0.131 - 0.145
9	0.15625	0.146 - 0.160
8	0.171875	0.161 - 0.176
7	0.1875	0.182 - 0.194
6	0.2031	0.194 - 0.212
5	0.2188	0.201 - 0.226
4	0.2344	0.225 - 0.243
3	0.2500	0.238 - 0.262
2	0.2656	0.254 - 0.278
1	0.2813	0.269 - 0.293
0	0.3125	0.301 - 0.325

**RELEASED**  
2015 FEB 04  
ECN 15-122

REV.	DESCRIPTION	DATE
A	NEW ISSUE	01.09.24
B	REFORMAT DWG. ADD ASTM/ASME SPECS (ZN D8 1) ADD GAUGE REF (C8-1), REF PAR 08-020A	09.06.01
C	DEFINED FINISH OPTION (ZN C8) AND EXAMPLE OF MATERIAL FIN WITH FINISH OTHER THAN 2B (ZN B5).	12.09.20
D	ADDED GAUGES 0-7.	15.01.06

DESIGN	DS	DATE
DRAWN	AJS	BY
CHECKED		
MFG. APPR.		
APPROVED		
DE APPR.		

DART AEROSPACE LTD	REV. D
HAWKESBURY, ONTARIO, CANADA	DRAWING NO
	M304S
	TITLE
	304/316 SS SHEET
	SCALE
	NTS
	SHEET 1 OF 1
	DATE
	15.01.06

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# 3008

TRA 1442

+EH-1694163001488

FEH-16948-3008488

**ESSAR  
STEEL**

ESSAR STEEL ALGOMA INC., 105 West Street, Sault Ste. Marie, Ontario, Canada P6A 7B4

SO No./Item & Date: 8055352 000080 2017/08/27	Shipment No. & Date: 1000245040 2017/08/27	TC No., Date & Time: ESA-411342 2017/08/28 - 21:24:47											
Sold to Customer Name and Address: LES ACHER TRANSSEC (1997) LTEE BOUL LE CORBUSIER #201-4034 LAVAL, Quebec, Canada H7L 6R2	Ship to Customer Name and Address: LES ACHER TRANSSEC (1997) LTEE RUE JEAN DOUTY 350 VARENNES, Quebec, Canada J3X 2P2	Customer PO No./Item: 0-4823476 SOL NO.: 1000245948 Cust Part No.: L61 TRANSPORT INC - 814AB 88148											
Customer Specification: HR STEEL SHEET Carbon CQ/CS ASTM A7011 L6 TY B (2015) Top Semi Critical Surface Improved Shape Gauge type MIN - 0.0080 * Cold break considered													
Supplementary Instructions: Test Cert 1 sent to collucan Test Cert 2: natalie.legault@achertranssec.com													
Inspection: Chemical Analysis		Cust User: GENERAL MANUFACTURING											
ESSAR STEEL ALGOMA INC. HEREBY CERTIFIES THAT THE MATERIAL HEREIN DESCRIBED WAS MADE AND TESTED IN ACCORDANCE WITH THE RULES OF THE SPECIFICATION SHOWN. ALL RESULTS ARE RETAINED IN ACCORDANCE WITH THE COMPANY'S STANDARD RECORD KEEPING PRACTICES. THIS FULL TEST REPORT MAY NOT BE REPRODUCED EXCEPT IN FULL WITHOUT WRITTEN APPROVAL OF ESSAR STEEL ALGOMA INC. IF YOU RECEIVE THIS DOCUMENT AND ARE NOT THE INTENDED RECEIVER, PLEASE CALL (709) 843-1093 FOR INSTRUCTIONS ON METHOD OF DISPOSAL OF DOCUMENT. THIS TEST REPORT WAS GENERATED BY A COMPUTERIZED SYSTEM AND IS VALID WITHOUT A PHYSICAL SIGNATURE.													
MEETS EN 10204 3.1 NO QUANTITY AND ENVIRONMENTAL CERTIFICATE AVAILABLE AT WWW.ALGOMA.COM													
ALL HEATS FULLY KILLED. HEATS DESIGNATED WITH (*) FINE GRAINED. HEATS INDICATED WITH (X) MEETS EN 10204 3.1 MEETS EN 10204 3.1 MEETS EN 10204 3.1													
Dimensions (T x W x L) 0.0370" x 48.000"	Batch No. SRP3330	Heat No.-MS 025204-03											
Quantity 35,500 LB													
CHEMICAL PROPERTIES													
025204	C	Mn	P	S	Si	Cr	Mo	Cu	Ni	Al	Fe	N	H
	0.05	0.24	0.005	0.005	0.020	0.02	0.02	0.05	0.00	0.028	0.000	0.000	0.000

KASHIF REJWAAN  
MANAGER METALLURGICAL SERVICES

"WARNING" THE TEST RESULTS AND VALUES REPORTED HEREIN INDICATE ONLY THAT (1) THE PARTICULAR STEEL FOR WHICH THIS CERTIFICATE IS ISSUED MEETS THE MINIMUM SPECIFIED YIELD STRENGTH AND (2) THE ANALYTICAL AND PHYSICAL PROPERTIES OF SUCH STEEL ARE IN CONFORMANCE WITH THE REQUIREMENTS OF THE SPECIFICATION INDICATED. THE RESULTS OR VALUES REPORTED WHICH CANNOT BE USED TO QUALIFY THE STEEL FOR ANY SPECIFICATION OTHER THAN THE ONE INDICATED AND CAN NOT BE RELIED UPON FOR ANY PURPOSE. (EXCLUDING QUALITY OR CALCULATIONS) IN REPRODUCING THE ACTUAL STRENGTH OF SUCH STEEL.

Date: 2017/08/28 Time: 22:05:10 Page no: 1 of 1

PO.6958



**“首钢”牌产品质量证明书**  
QUALITY CERTIFICATE OF “SHOUGANG” BRAND

中国国际贸易中心  
 100004 北京 中国  
 电话: 010-65051111  
 电传: 010-65051111  
 电邮: CHINA@CHINA.COM.CN  
 中国国际贸易中心  
 100004 北京 中国  
 电话: 010-65051111  
 电传: 010-65051111  
 电邮: CHINA@CHINA.COM.CN

製造厂: 首钢集团: 首钢京唐钢铁联合有限责任公司  
MANUFACTURER: SHOUANG GROUP, SHOUANG JIOTANG UNITED IRON & STEEL CO., LTD

[illegible]

FACTER COMPLETE INC P.O. - 26958 S.D. - 393870

7x

GJ17-27-V9 MTC

**HBIS 河钢股份有限公司唐山分公司**

—合—同—附—件—

**CONCLUSIONS**

**CONTRACTING**

0.84<sup>b</sup>1219

湖 塘 <mm>24

## DISCUSSION

ASTM

A1009/A1009M-2000/2013W41/2013W41

产品名称: 冷轧板镀锌板

**PRODUCT:** Cold rolled low carbon steel strip

看我的脸像不像你。

10KX-0-01-04/02/01

TAKE OF QUALITY

系統 檢 査,

SYSTEM NO.

温度 (K)	平衡常数 $K_p$
1000	0.0001
1200	0.001
1400	0.01
1600	0.1
1800	1.0
2000	10.0
2200	100.0
2400	1000.0
2600	10000.0
2800	100000.0
3000	1000000.0

TOTAL WEIGHT

訂 價 單 位:

唐山钢铁集团有限责任公司

CUSTOMER

謝山劉世儒即有題詞在公祠（附錄）（重紀旬·授仁堂藏代庖劉世儒作）

88-42372

TX-400 002.

FD-201702170484

**CERTIFICATE NO.**

[illegible]

地址：中国河北省唐山市路北区院前街9号

州内电话: +86 315-2703330  
售后服务电话: +86 315-2701172

打印人： 唐山市熱風園有聲書社

生产日期: 2017-07-10

发布日期: 2017-11-17

**ADD:** No.9 Bisha Road, 1st fl.  
**TEL:** www.singtel.com.sg

**TELEPHONE**

**REFERENCES**

**INDEX**

DELIVERY DATE

PO 7665

FECK-20G48

#382

P.O. - MC763, ET MC 7665 S.O. - 394862

ACTION ORIENTED TRENDS

HEAT: 7PB0074460 7

3x

HBIS 钢铁股份有限公司唐山分公司

质量证明书

合同编号: D200128122  
 规格 (mm): 0.81\*1210  
 标准: ASTM  
 牌号: A1008/A1008M-2000/0121041/201201

产品名称: 冷轧低碳钢  
 产品代码: Cold rolled low carbon steel strip

质量证明书号: TOCX-0-01-04(202)  
 系统编号: 00100701000010  
 系统编号: 10  
 总重量 (t): 10

订货单位: 唐山钢铁集团有限责任公司

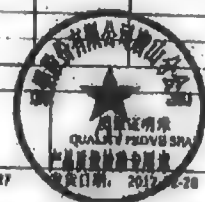
客户名称:

唐山钢铁集团有限责任公司 (唐山) (重信保仁) (重信保仁) (重信保仁)

车号: 冀A-41290  
 证明书号: 0020170220044

批次号 ROLLING NO.	卷号 COIL NO.	炉批号 FURNACE NO.	牌号 GRADE	重量 WEIGHT (t)	表面质量 SURFACE QUALITY	表面缺陷 SURFACE DEFECT	热处理 THERMAL TREATMENT	化学成分 (%) CHEMICAL COMPOSITION													
								C	Si	Mn	P	S	Cr	Ni	Cu	Mo	Al	R	Nb	V	Ti
7700074460	77114152080	7701130	C20	20			HR	0.05	0.030	0.17	0.000	0.010	0.01	0.01	0.01	0.005	0.005	0.000	0.000	0.000	0.000
批次号 ROLLING NO.	卷号 COIL NO.	炉批号 FURNACE NO.	抗拉强度 T.S. (MPa) R <sub>m</sub>	屈服强度 Y.S. (MPa) R <sub>eH</sub>	伸长率 EL. (%) A <sub>50mm</sub>	断面收缩率 RT	硬度 HARTNESS														
7700074460	77114152080	7701130	335	205	30.5																

注: Y.S.-YIELD STRENGTH T.S.-TENSILE STRENGTH EL.-ELONGATION RT-REDUCTION OF AREA  
 1. 无质量证明书无效。 Certificate with quality proof and.  
 2. 本证明书本产品按照相应标准规定进行制造和检验。 We certify that the products have been produced and inspected according to standard and agreement.  
 3. 证书符合 GB 18904-2004 3.1. Certificate according to GB 18904-2004 3.1.  
 4. 尺寸合格。 Dimensional complies with standard.



地址: 中国河北省唐山市路北区长安路9号 电话: 466 315-2703310 打印人: 唐山钢铁集团有限责任公司 生产日期: 2017-02-27  
 ADD: No.9 Dabao Road, Lubei District Tangshan, Hebei, China 售后服务电话: 466 315-2703322 发货日期: 2017-02-28  
 URL: www.hbis.com.cn TELEPHONE FAXER DATE DELIVERY DATE

PO. 7665  
H8351

#3280  
Steel-20648  
P.O. - 427657 DE AC 7665 S.O. - 394862

00.69188 112

00.12663

**KAISER**  
**ALUMINUM**  
Trentwood Works - Spokane, WA 99215  
Phone: (800) 367-2586

**CERTIFIED TEST REPORT**

Serial Number  
4475188

CUSTOMER PO NUMBER: C74502-5		WORK PACKAGE: CUSTOMER PART NUMBER: 104019/11		SHIP RINLOAD: GOVT CONTRACT NUMBER:	
KAISER ORDER NO: 1229517-5		SHIP DATE: 23-AUG-2017		CLAD: T3	
QUANTITY: 146 PCS EST.		TRUCK BAL. #: 2068610		PRODUCT DESCRIPTION: HT Flat Sheet	
WEIGHT SHIPPED: 3292 LB		GAUGE: 0.0320 IN		DIAMETER/THICKNESS: 48.000 IN (1219.2 MM)	
				LENGTH: 144.000 IN (3657.6 MM)	

MHU 2144356: LOT 237171B4: 146 pieces: *0.70519*

**Certified Specifications**

AMS 4037/RevD  
CMMP 019/RevD  
AMS-00-A-250/4/RevB  
CMMP 025/RevV  
ASTM B 209/Rev14

Test Code: 1504

Lot: 237171B4 Cast 403

Drop 72

**Test Results**

Ingot 4

Melted in USA

Dir / # Tests  
LT / 2 (Min-Max)  
Ultimate KSI (MPa)  
87.8 : 68.1  
(467 : 470)  
Yield KSI (MPa)  
46.2 : 46.3  
(319 : 319)  
Elongation %  
17.9 : 18.0

(ASTM E1251)  
Chemistry:  
Actual(wt%)  
SI  
Fe 0.20  
Cu 4.8  
Mn 0.56  
Mg 1.3  
Cr 0.01  
Zn 0.17  
Ti 0.02  
V 0.01  
Zr 0.01  
Other 0.02

**ALLOY LIMITS**

2024  
MIN(wt%)  
MAX(wt%)  
SI  
Fe 0.00  
Cu 3.8  
Mn 0.30  
Mg 1.2  
Cr 0.00  
Zn 0.00  
Ti 0.00  
V 0.00  
Zr 0.00  
Other 0.05  
Aluminum Remainder  
0.50  
0.50  
0.9  
1.8  
0.10  
0.25  
0.15  
0.05  
0.05  
0.06  
0.06  
0.05  
0.16

# CERTIFIED TEST REPORT

**Serial Number**  
**4475188**

**Trentwood Works - Spokane, WA 99213**  
**Phone: (800) 367-2586**

## CERTIFICATION

[illegible]

James F. Kennedy

**JAMES HEMENWAY, TECHNICAL PROCESS MANAGER**

#3117 D.R.

**KAISER  
ALUMINUM**  
Trentwood Works - Spokane, WA 99215  
Phone: (800) 367-2586

**CERTIFIED TEST REPORT**

Serial Number  
4465899

CUSTOMER PO NUMBER: C74254-4		WORK PACKAGE:		CUSTOMER PART NUMBER:		SHIP RUN/LOAD: 103945/13		GOVT CONTRACT NUMBER:	
KAISER ORDER NO: 1236242-4		SHIP DATE: 7-JUN-2017		ALLOW: 2024		CLAD: BARE		PRODUCT DESCRIPTION: HT Flat Sheet	
WEIGHT SHIPPED: 2860 LB		QUANTITY: 106 PCS EST.		TRUCKS/LR: 2067265		GUDGE: 0.0400 IN		TOLERANCE: 48,000 IN	
						(1.0460 MM)		(1219.2 MM)	
								LENGTH: 144,000 IN	
								(3657.6 MM)	

MHU 2116170; LOT/21954787; 106 pieces; 0263511

**Certified Specifications**

AMS 4037/RevQ  
CMMP 019/RevD  
AMS-00-A-250/A/RevB  
CMMP 025/RevV  
ASTM B 209/Rev14

Test Code: 4502  
Lot: 21954787  
Cast 433

Test Results  
Ingot 1

Melted in USA

		Dir / # Tests		Ultimate KSI (MPa)		Yield KSI (MPa)		Elongation %	
Temper		LT / 2 (Min/Max)		58.3 : 89.0 (471 : 476)		46.8 : 47.2 (323 : 325)		17.5 : 19.1	
T3									

# CERTIFIED TEST REPORT

**Trentwood Works - Spokane, WA 99215**  
**Phone: (800) 367-2585**

[illegible]

James F. Kennedy

**JAMES HEMENWAY, TECHNICAL PROCESS MANAGER**



#3142

**AMAG-**  
ROLLINGAbnahmeprüfzeugnis 3.1 (EN 10204)  
Inspection certificate - mill certificate

Nr.: 85170692 01/1

Rev.: 0

Seite / page: 1 von / of 3

Datum / date: 2015 05 07

Zustellort nach / certified to ISO 9001, ISO 9001:2015, DIN EN ISO 9001:2015, ISO 14001, ISO 14001:2015

Bestell Nr. / order no.:	C 68965
Datum / date:	2015 02 05
Auftragsbest. Nr. / order confirm no.:	688222
Datum / date:	2015 02 09
Lieferschein Nr. / delivery note:	85170692
Datum / date:	2015 05 29

Produkt / product	Bedingungen / terms
Form / form: Sheet	Technische Lieferbedingungen / techn. spec.:
Werkstoff / material: 2024	AMS-QQ-A-250/2A, 08.1998
Zustand / temper: T3	ASTM B 209 - 10
Dm. / dim.: [inch] 0.050x48.00x144.00	AMS 4037Q, 12.2014
	WL 3.1354-1, 12.1987
	Cessna CMMPO19, Rev. D, 08-07-01
	Cessna CMMPO25, Rev. U, 05-26-11
	ANSI H35.2-2013
	ABM 1-6015, Issue 2, OCT 2004
	AIR9048-110, 26 December 1978
	Sondenvorschrift / special terms:

AB-Pos. and item	Stückzahl / quantity	Guß Nr. cast no.	Werkstoff material	Koils packings	Gewicht netto weight net	Stk. pos.
05	689680100	010067462/5	2024	6882220002	2427,249 lbs	70
05	689680100	010067462/5	2024	6882220003	2215,608 lbs	64

Chemische Zusammensetzung (1% Gewichtsanteil) / Chemical composition (1% weight proportion) (C53)

Guß Nr. / cast no.	material	Si	Fe	Cu	Al	Mg	Cr	Zn	Ti	Others
010067462/5	2024	-	-	3.8	0.30	1.2	-	-	-	Others
	spec. min.	-	-	-	-	-	-	-	-	Each
	spec. max.	0.50	0.50	4.9	0.90	1.8	0.10	0.25	0.15	-
	actual	0.10	0.11	4.5	0.52	1.5	0.01	0.16	0.04	0.05
	100% min.	-	-	-	-	-	-	-	-	0.02
	100% max.	-	-	-	-	-	-	-	-	-
	actual	0.15	-	-	-	-	-	-	-	-
	actual	0.04	-	-	-	-	-	-	-	-

Zertifiziert nach / certified to ISO 9001, ISO 9001:2008, EN ISO 9001:2008, ISO 14001, ISO 14001:2004

Zugprüfung 3.1 / tensile test 3.1									
Material Lot/No.	Zustand temper	Richtung direction	Tests	UTS [N/mm <sup>2</sup> ]	YS [N/mm <sup>2</sup> ]	AZ <sup>2</sup> [%]			
				spec.min.	42,1	15			
				spec.max.	-	-			
69968/01	T3	LT	6	from	48,6	17			
69968/01	T3	LT	10	to	49,0	18			
Biege- / Leitmähigkeit / other: Compressive OK									
Material Lot/No.	Zustand temper	Tests	L / ec [% IACS]	ΔL / Δec per batch [% IACS]					
			spec.min.	-					
			spec.max.	32,8	2,5				
69968/01	T3	18	from	30,2	0,3				
69968/01	T3	10	to	30,5	0,3				
Sonstige Prüfungen / other tests									
Biegeversuch: OK / Transverse bend test: OK									
Intermetalline Korrosion: OK / Intergranular corrosion: OK									
Maßkontrolle: OK / Dimensional Check: OK									
Oberfläche: OK / Surface inspection: OK									
Benennungen / notes									
Die Dimensionstoleranzen entsprechen ANSI XXX / As standard, dimensional tolerances are to ANSI XXX									

Nr.: 85170692 01/11  
Rev.: 0

Seite / page: 3 von 1 of 3  
Datum / date: 2015 05 07

Zachemie nash / certified in ISO 9001, ISO 14001, ISO 45001, OHSAS 18001, ENVS 9140, ISO 14001, NaOCCAP

Ausgestellt nach Airbus Zulassung Nr. 30272.

Wir bestätigen, dass die gesamte Lieferung und somit allen nicht anders dargelegt aller Forderungen (Spezifikationen, Zeichnungen, Aufträge) hergestellt und geprüft wurde.

Das Qualitätsmanagementsystem erfüllt die Anforderungen der AIK/SA/001:3.

Das Qualitätsmanagement stellt Ihnen die Anforderungen an Ihre Organisation dar. Hier stellt sich die Frage, wie Sie diese Anforderungen erfüllen können. Die Antwort darauf ist: Durch die Implementierung eines Qualitätsmanagementsystems. Ein solches System ist ein Instrument, das Ihnen hilft, Ihre Organisation zu verbessern und Ihre Kunden zu überzeugen. Es ist ein Instrument, das Ihnen hilft, Ihre Organisation zu verbessern und Ihre Kunden zu überzeugen. Es ist ein Instrument, das Ihnen hilft, Ihre Organisation zu verbessern und Ihre Kunden zu überzeugen.

Herzgesell, Konstantin und Gerdur Bach Hansen, Beechcraft  
 1000 Westland Genebrivon Lieferantennummer V21775

Agusta Westland Generalung Liebfahrer  
Liebfahrer, Agusta Westland Generalung Liebfahrer

Certified that the whole of the supplies detailed hereon have been manufactured, inspected, tested and unless otherwise issued under Airbus Approval No. 30272.

Order as follows: The Order Management System arrangements in respect of these supplies comply with the stated above conform in all respects to the Specifications, Drawings and Contract.

Order relevant to the Order

requirements of AUKSA/001-3.

Manufactured, inspected and tested according to

Es wird bezweifelt, dass die Lieferung mehrheitlich wurde und den Vereinbarungen bei der Bestellung entspricht.

It is understood that the information provided in this advertisement is for informational purposes only and does not constitute an offer of insurance. The information is not intended to be used for any other purpose. The information is not intended to be used for any other purpose. The information is not intended to be used for any other purpose.

**What's new in this release?** Factory 3.0 includes:

**Elmfield**

## h.ranđićama al

Rendi Herban

**Hersheyland:** Overmilk / sweets often: The goods are of Austrian origin

Handelsland: Österreich / goods origin: the goods are of Austrian origin.  
Abschreibemethode: Güter ohne Unterschrift / Automated - yield without being signed.



# 3192

# KAISER ALUMINUM

Trentwood Works - Spokane, WA 99215  
Phone: (800) 367-2586

## CERTIFIED TEST REPORT

Serial Number  
4466392

CUSTOMER PO NUMBER: C74254-5		WORK PACKAGE:		CUSTOMER PART NUMBER:		SHIP RUN/LOAD: 103950/20		GOVT CONTRACT NUMBER:	
KAISER ORDER NO: 1236242-5		SHIP DATE: 12-JUN-2011		ALLOY: 2024		TEMPER: T3		PRODUCT DESCRIPTION: Kaiser Stretched	
WEIGHT SHIPPED: 3278 LB		QUANTITY: 58 PCS EST.		TRUCK BLN: 2067334		GAUGE: 0.0800 IN (2.0320 MM)		DIAMETER WIDTH: 48.000 IN (1219.2 MM)	
								LENGTH: 144.000 IN (3657.6 MM)	

MHU 2116107 LOT 22397389: 58 pieces: **0299511**

### Certified Specifications

✓ AMS 4037/Rev Q  
CMMP 019/Rev D  
✓ AMS-QC-A-250/4/Rev 8  
✓ ASTM B 209/Rev 14  
✓ CMMP 025/Rev V

Test Code: **1306**

Lot: **22397389** Cast 433

(ASTM B8/B557)

(EN 2002-1)

Tensile: T3

Dir / # Tests  
LT / 2 (Min:Max)

Ultimate KSI (MPa)  
58.1 : 68.2  
(470 : 470)

Yield KSI (MPa)  
47.3 : 47.5  
(326 : 328)

Elongation %  
18.1 : 18.3

### Test Results

Ingot 4

Drop 77

Melted in USA

(ASTM E1251)

Chemistry:

Actual(wt%)

2024

MIN(wt%)

MAX(wt%)

SI

FE

CU

MIN

MG

CR

ZN

TI

V

OTHER

0.10

0.19

4.7

0.58

1.4

0.01

0.09

0.02

0.01

0.05

0.00

0.00

3.8

0.30

1.2

0.00

0.00

0.00

0.00

0.00

0.00

0.50

0.50

0.10

0.10

0.25

0.15

0.05

0.05

0.05

0.00

0.00

0.00

0.00

0.00

0.00

0.00

0.00

0.00

0.00

### ALLOY LIMITS

Aluminum Remainder

# CERTIFIED TEST REPORT

Serial Number  
4466392

**Trentwood Works - Spokane, WA 99215**  
**Phone: (800) 367-2586**

## CERTIFICATION

[illegible]

James F. Kennedy

**JAMES HEMENWAY, TECHNICAL PROCESS MANAGER**



#3407

TRA-1725



North American Stainless Canada Inc.  
740 Imperial Road North  
Guelph, ON N1K1Z3  
Canada

## METALLURGICAL TEST REPORT

6870 Highway 42 East  
Ghent, KY 41045-9615  
(502) 347-6000 019204

Certificate: 326764 1

Customer: 007040 102

Date: 8/24/2017 Page: 1

Steel: 304

Finish: 2B

Corrosion: ASTM A262/15 A;180Bend-OK

Your Order: P207132

NAS Order: IN 0252387 01

## PRODUCT DESCRIPTION:

STAINLESS STEEL COIL, C.R. ANNEALED & PICKLED; UNS 30400  
ASTM A240/A666, A480/16b, A666/15, ASME SA240/15, SA480/15, SA666/15  
CERAMIC ONLY ON FOLLOWING ASTM: A276/17, A479/17, A484/16, A312/16  
CERAMIC ONLY ON FOLLOWING ASME: SA312/13, SA479/13  
AMS 5513J XDRK; MIL-B-5059D AMEND 3 (X CROWN MEAS)  
NACE MR0175/ISO 15156-3:2009 A, MR0103/07, QCS766D-A X MAG PERM  
MIN. SOLUTION ANNEAL TEMP 1900F, WATER QUENCHED

## REMARKS:

Mat'l is Free of Mercury Contamination. No weld repairs.  
EN 10204:2004 3.1; RoHS 1 & 2 Compliant  
Material is Free of Radioactive Contamination  
Steel Making Process: EAF, AOD, & Cont. Casting  
Product Mfg. by a Quality Mgt. Sys. in Conf. w/ISO 9001  
\*Melted & Manufactured in the USA; Mat'l is DPARS Compliant

Product Id	Coil #	Skid # Thickness	Width	Weight	-----Length-----	Mark	Pieces	Commodity Code
03471Y C	03471Y C	.1050	48.0000	15,380	COIL	1	1	

Lab Accreditation Bureau, ISO/INC 17025, Certificate# L2323

CHEMICAL ANALYSIS CM(Country of Melt) ES(Spain) US(United States) ZA(South Africa) JP(Japan) Chemical Analysis per ASTM A751/14a

HEAT	CM	C %	CR %	CU %	MN %	MO %	N %	NI %	P %	S %
471Y	US	.0437	18.0470	.3755	1.7995	.3515	.0815	8.0435	.0295	.0017
SI %										
.3300										

## MECHANICAL PROPERTIES

Product Id#	Coil #	1 d 0 r	UTS KSI	20C .2% YS KSI	20C ELONG %-2"	% Hard RB	Tail Hard
03471Y C	03471Y C	F T	98.57	51.23	47.17	90.00	88.00

NAS hereby certifies that the analysis on this certification is correct. Based upon the results and the accuracy of the test methods used, the material meets the specifications stated. These results relate only to the items tested and this report cannot be reproduced, except in its entirety, without the written approval of NAS.

Technical  
Dept. Mgr.

KRIS LARK

8/29/2017

#3425

TRA-1845



North American Stainless Canada Inc.  
740 Imperial Road North  
Guelph, ON N1K1Z3  
Canada

# METALLURGICAL TEST REPORT

6870 Highway 42 East  
Ghent, KY 41045-9615  
(502) 347-6000

Certificate: 231861 2

Customer: 007035 501

Date: 10/26/2016 Page: 1

Steel: 304

Finish: 2B

Corrosion: ASTM A262/15 A; 180Bend-OK

Your Order: 781026

NAS Order: PN 0069821 14

## PRODUCT DESCRIPTION:

STAINLESS STEEL COIL, C.R. ANNEALED & PICKLED; UNS 30400  
ASME A240/304, A480/15, A666/15; ASME SA240/15, SA480/15, SA666/15  
CHEM ONLY ON FOLLOWING ASTM: A276/16, A479/16, A484/15, A312/16  
CHEM ONLY ON FOLLOWING ASME: SA312/15, SA479/13  
AMS 5513J 304K; MIL-S-5059D AMEND3 (X CHROM MEAS)  
NACE MR0175/ISO 15156-3:2009 A, MR0103/07/QQST660-A X MAG FERM  
MIN. SOLUTION ANNEAL TEMP 1900F, WATER QUENCHED

## REMARKS:

Mat'l is Free of Mercury Contamination. No weld repairs.  
EN 10204:2004 3.1; RoHS 1 & 2 Compliant  
Material is Free of Radioactive Contamination  
Steel Making Process: EAF, AOD, & Cont. Casting  
Product Mfg. by a Quality Mfg. Sys. in Conf. w/ISO 9001  
\*Melted & Manufactured in the USA; Mat'l is DPMs Compliant

Product Id	Coil #	Skid #	Thickness	Width	Weight	Length	Mark	Pieces	Commodity code
030808 B	030808 B		.0480	48.0000	20,720	COIL	1	1	74261495

Lab Accreditation Bureau, ISO/IEC 17025, Certificate# L2323

CHEMICAL ANALYSIS CN(Country of Melt) ES(Spain) US(United States) ZA(South Africa) JP(Japan) Chemical Analysis per ASTM A751/14a

ITEM	CH	C %	CR %	CU %	FE %	MO %	N %	NI %	P %	S %
0808	US	.0450	18.0445	.4925	1.6575	.3220	.0598	8.0190	.0290	.0010
		SI %								
		.3670								

## MECHANICAL PROPERTIES

Product Id#	Coil #	1 d = 1 = 1	UTS KSI	20C .2% YS KSI	20C ELONG % 1/2"	Hard RB	Tail Hard	Grain No.
030808 B	030808 B	P T	100.16	52.12	47.23	88.00	84.00	10.00

NAS hereby certifies that the analysis on this certification is correct. Based upon the results and the accuracy of the test methods used, the material meets the specifications stated. These results relate only to the items tested and this report cannot be reproduced, except in its entirety, without the written approval of NAS.

Technical  
Dept. Mgr.

KRIS LARK

10/26/2016